

Weekly Lessons/Overview and Goals: How do changes in an ecosystem affect a food web?

TEKS: 4.9A & B

4.9 Organisms and environments. The student knows and understands that living organisms within an ecosystem interact with one another and with their environment. The student is expected to:

4.9A investigate that most producers need sunlight, water, and carbon dioxide to make their own food, while consumers are dependent on other organisms for food

4.9B describe the flow of energy through food webs, beginning with the Sun, and predict how changes in the ecosystem affect the food web

TEKS ABOVE AND BELOW

Fifth Grade:

5.9A observe the way organisms live and survive in their ecosystem by interacting with the living and non- living components (R)

5.9B describe the flow of energy within a food web, including the roles of the Sun, producers, consumers, and decomposers ®

Third Grade:

3.9A observe and describe the physical characteristics of environments and how they support populations and communities of plants and animals within an ecosystem (S)

3.9B identify and describe the flow of energy in a food chain and predict how changes in a food chain affect the ecosystem such as removal of frogs from a pond or bees from a field

Key Vocabulary

TEK 4.9A	TEK 4.9B
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producer	food web	<i>herbivore</i>
sunlight	food chain	<i>carnivore</i>
consumer	ecosystem	<i>omnivore</i>
carbon dioxide	flow	<i>predator</i>
organism	<i>perish</i>	<i>survive</i>
oxygen	<i>thrive</i>	<i>prey</i>
water / agua		source

Monday: Exploring ecosystems

Essential Question: How do changes in an ecosystem affect a food web?

Engage Ask this question: How do humans impact water and ecosystems that live in water?

Explore Each table group will focus on collecting information on one ecosystem in a biome. (make sure they understand that the desert is a biome and that many ecosystems may exist within that biome. The same applies to marine, rainforest, freshwater, forest). Make sure each group is doing something different. Students can use books or a website to collect their data. (*Daily Grade)

Choices:

1. Ponds
2. Coral reef

3. Forest
4. Desert
5. ocean/marine

Explain Using large chart paper, students will include details about their assigned ecosystem

Elaborate Students will share their posters with others via a gallery walk. Make sure the posters are posted around the room.

Evaluate Notice & Wonder - ask “what did you notice or wonder about a poster you saw in the room?” Allow time for discussion.

Tuesday: Analyzing ecosystems

Essential Question: How do changes in an ecosystem affect a food web?

Engage Thinking about yesterday, how do you think humans impact forest ecosystems?

Explore PowerPoint Presentation - [Local Disasters and how they affect Texas Ecosystems](#)

Explain Ask these Questions:

- What changes can happen to an ecosystem?
- How will the removal of an organism affect the food chain and food web it is a part of?

Elaborate Students will revisit their posters and determine a change made to their ecosystem and the impact it would have. Students will also remove one animal from their ecosystem and determine the impact it would have.

Evaluate Students will share their changes/impact with the class

Wednesday & Thursday : two day project

Essential Question: How does a change in an ecosystem affect the organisms that live in it?

Engage Ask, “how many of you have been camping? How is camping different than staying in a hotel?”

Explore, Explain & Elaborate!

Each table group will be assigned a state park to research. They will first write down their research in their notebooks. Once you have checked their research, they can begin their Google Slides presentation. Slides in presentation must have the same information as their notebooks.

Research must include:

- Geography
- Location in Texas
- Types of wildlife that live in the park
- Detailed information on at least two species living in the park
- Types of food webs at the park - what might a food web at that park look like?

Park Options - Assign to groups

[Garner State Park](#)

[Estero Llano Grande State Park](#)

[Mission Tejas State Park](#)

[Caprock Canyons State Park](#)

[Big Bend Ranch State Park](#)

**If you need to assign more state parks, [use this link](#) to help choose one on the map

Evaluate Presentations given Friday

[Rubric](#)

Friday: Presentation day! (major grade)

Unit DCA * Melinda sent to print services on Monday 3/25

Differentiation: A variety of activities (application, concrete, and kinesthetic) will be incorporated into both days to engage all learners. Kagan structures will be introduced the first week of school.